

**UNIQUE DESIGN
EXPRO LR
Linear to Rotary
Pneumatic Actuators**



Expro Engineering

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Expro LR linear to rotary pneumatic actuators

Expro LR linear to rotary pneumatic actuators are designed for use in both regulating control and on-off applications. They are patented products, well suitable for any quarter-turn rotary valve applications with long service life requirement.

Expro LR linear to rotary pneumatic actuators, when used for valve applications, can provide very large torque to close and open the valves. Meantime they close the valves with zero speed. Therefore they can provide very good sealing and reduce valve sealing surface damages.

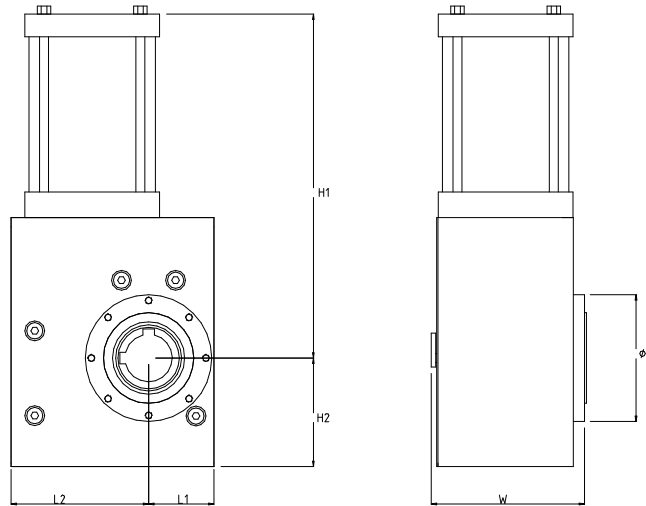
Expro LR linear to rotary pneumatic actuators, when used for on-off valve applications, can provide on-off locks. Even in power failure situation, they can maintain the valves in on or off positions with sufficient force. These actuators could be used for operations in remote area where a large continuous power supply is not available, for example, sub-sea applications.

Expro LR linear to rotary pneumatic actuators, when used for valve regulation, can provide more accurate control. Even in valve close location where the control accuracy is very difficult to achieve, they can still reduce absolute control errors plus providing more force for stability in this area. More accuracy means more saving.

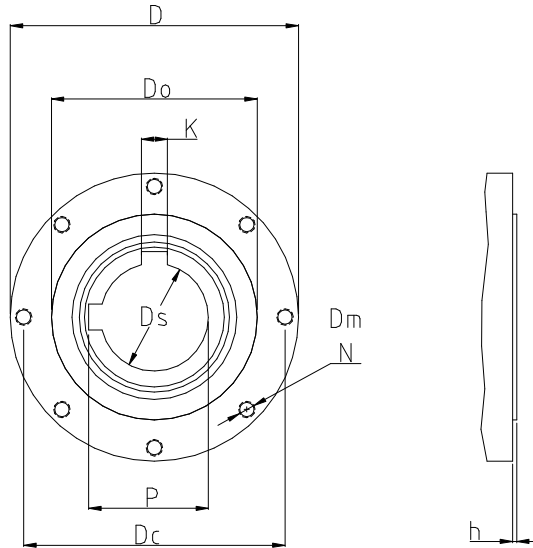
Expro LR linear to rotary pneumatic actuators currently have 3 standard models with minimum output torque from 1900 Nm to 5200 Nm at 6 bar supply air pressure. The normal supply pressure is from 6 bar to 10 bar. Other models and sizes are available at customer's request, such as smaller or larger sizes, and some models with fail-safe spring to fail-safe open or close the valves.

Expro LR Linear to Rotary Pneumatic Actuators

Model	Minimum Torque n-m	H1 mm	H2 mm	L1 mm	L2 mm	W mm	Cylinder Bore mm	Cylinder Stroke mm	Cylinder Connector NPT	Output Stroke degree °
LR-F16	1900	760	240	145	305	320	200	250	1/2"	90
LR-F25	3000	760	240	145	305	340	250	250	3/4"	90
LR-F30	6900	940	390	300	450	400	300	400	1"	90



Basic Dimensions of LR Pneumatic Actuators



Flange Dimensions for LR Pneumatic Actuators

Dimension Data

Model	D	D _s H 8	K	P	D _o f 8	h	D _c	D _m	No. of bolts N
LR-F16	180	95	22.22	105.5	130	4	165	M20	4
LR-F25	280	105	25.40	116.3	200	4	254	M16	8
LR-F30	320	120	31.75	133.9	230	4	298	M20	8

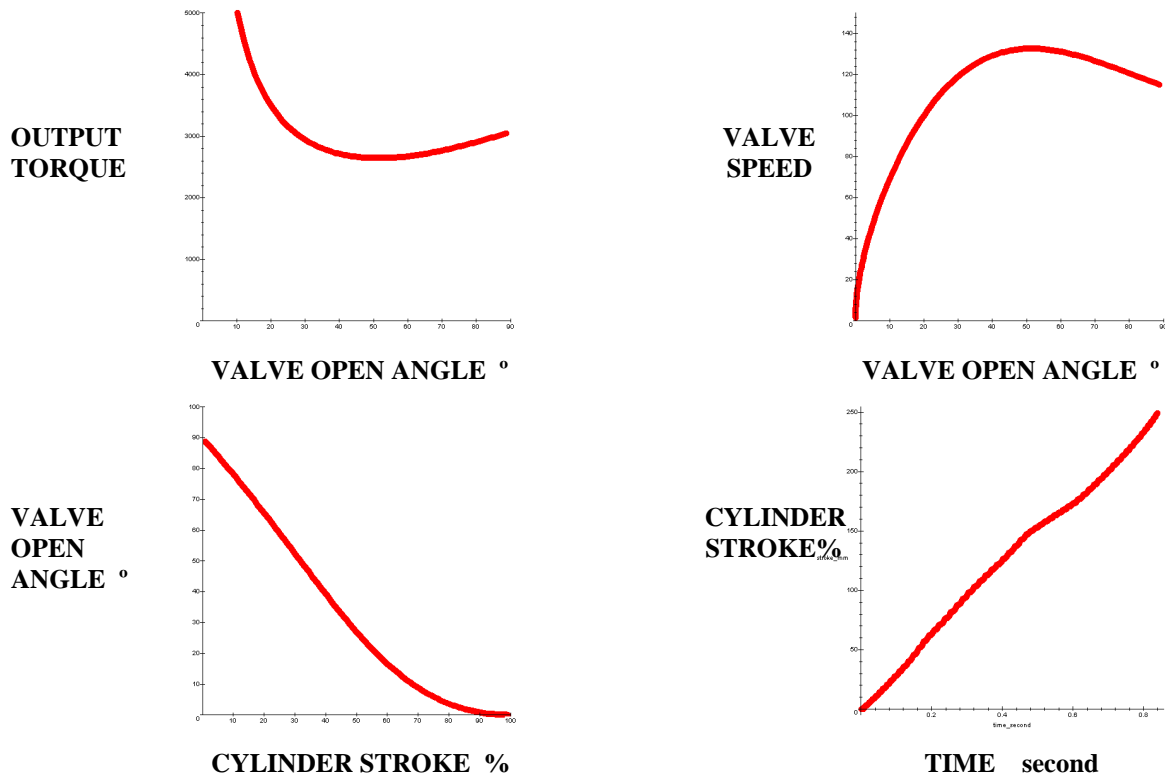
Notes:

1. The standard mounting flange dimensions meet ISO 5211:2001(E).
2. Configurations can be modified to meet customers' specifications.

Expro LR pneumatic actuators specifications

	LR-F16	LR-F25	LR-F30
Supply Air Pressure	6~10 bar	6~10 bar	6~10 bar
Supply Air	Filtered air	Filtered air	Filtered air
Valve Shaft Rotation to close valve	Counterclockwise from valve mount side	Counterclockwise from valve mount side	Counterclockwise from valve mount side
Operation Temperature	-40°C ~ 80°C	-40°C ~ 80°C	-40°C ~ 80°C
Mounting Flange	ISO 5211 F16	ISO 5211 F25	ISO 5211 F30
Maximum Valve Closing Speed	1 second	1 second	1 second
Maximum Valve Opening Speed	1 second	1 second	1 second

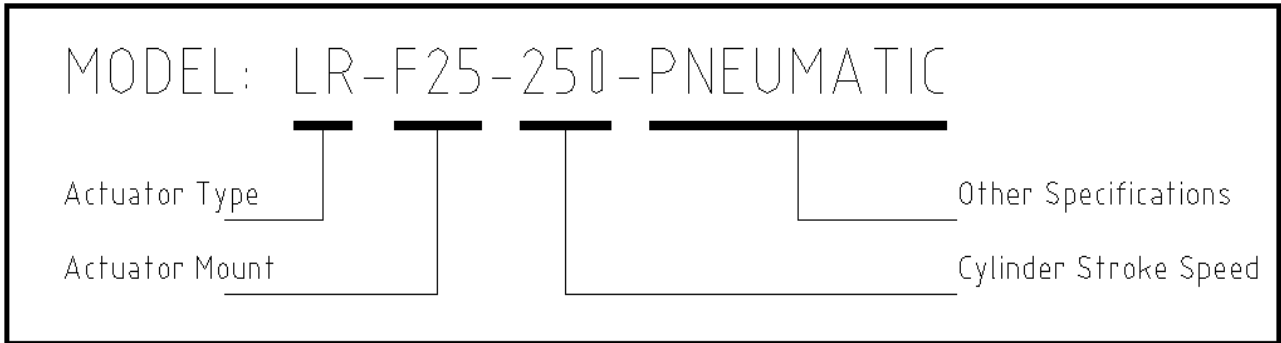
Typical Expro LR pneumatic actuator performance curves of torque, speed and operation time:



Expro LR Pneumatic Actuator Ordering Information

How to Order:

- The following is an example showing how to order the actuator, based on the valve mounting flange requirement, cylinder stroke speed and other options.



Actuator Mounting Type:

Expro basically follows ISO 5211 mounting dimensions. Customers can specify flange mounting dimensions and other parameters.

Minimum Force/Torque and supply air pressure:

Expro actuators provide minimum force/torque at specified valve position. When an actuator is ordered, Expro needs to know at which valve position a minimum force/torque is required and how much, then the actuator can be made to satisfy the specifications. Based on this, Expro will advise what is the minimum supply air pressure to achieve the actuator's optimal performance.

Notes:

- All data are subject to change without notice.